

REMARKS*Status of Claims*

Before entry of this Amendment, claims 1, 8, 13, 16, 19 and 45 – 65 were pending. By way of this Amendment, new claims 66 – 76 have been added. Thus, claims 1, 8, 13, 16, 19 and 45 – 76 are currently pending and are submitted for examination on the merits. Claims 1, 13, 19 and 45 are independent.

Claim Objections

Claims 1, 8, 13, 19 and 45 – 65 are objected to for informalities. By way of this Reply, these claims have been responsively amended. Accordingly, withdrawal of the objections is respectfully requested.

Rejection Pursuant to 35 USC 103

All pending claims are rejected as being unpatentable over various combinations of U.S. Patent No. 6,623,698 (“Kuo”), U.S. Patent No. 5,476,384 (“Giuliani”), U.S. Re. 36,699 (“Murayama”), U.S. Patent No. 6,102,872 (“Doneen”), U.S. Patent No. 6,611,780 (“Lundell”), U.S. Patent No. 6,303,081 (“Mink”), and U.S. Patent No. 6,685,471 (“Kawamura”). By way of this Reply, independent claims 1, 13, 19 and 45 have been amended. To the extent that the rejection may still apply to the amended claims, the rejections are respectfully traversed.

As clarified through claim amendments, embodiments of the invention require a microchip having at least one of a lab-on-a-chip system and a smart dispenser. The Examiner has equated a purported matrix of sensors 138, 140 of Kuo to the claimed

“microchip.” Applicant respectfully disagrees. Kuo merely discloses electrodes 138, 140, which merely output simple electrical signals without any processing. Even if the electrodes 138, 140 were generalized as any “sensors” (which Applicant respectfully traverses), the purported matrix of sensors still cannot be equated to a “microchip” as known to those of ordinary skill in the art. As clarified through the claim amendments, the microchip comprises at least one of a lab-on-a-chip system and a smart dispenser, and thus is clearly further distinguishable from the electrodes 138, 140 of Kuo, or any purported matrix of sensors.

Further, there is no reason, motivation or suggestion to modify Kuo to replace the electrodes 138, 140 with microchips. Kuo is directed to a toothbrush, which is subject to a complex environment including mechanical pressures and vibrations and chemically active substances (toothpaste), and thus cannot be a satisfactory platform for microchips.

As also clarified through claim amendments, embodiments of the invention include a shell substantially enclosing the microchip. The Examiner has equated substances disposed on a bite portion of the device as taught by Mink to a coating. Applicant respectfully disagrees. Mink does not disclose disposing the substance as a coating. Further, the substances as taught by Mink cannot be equated to the “shell” as claimed, which functionally substantially encloses the microchip.

Moreover, Applicant respectfully submits that there is no reason, motivation, or suggestion to combine the cited references. As Kuo, Giuliani, Murayama, and Kawamura are directed to toothbrushes, there is no reason, motivation or suggestion to enclose the brush in a shell, nor is there motivation to embed microchips in the brush.

Doneen is directed to glucose detection, and there is no motivation to modify the glucose detection to have a plurality of interchangeable assemblies.

In addition, relying on a total number of seven (7) references without providing a reason, motivation or suggestion to combine the references or to make modifications to the systems and methods as taught by the references, it is likely that the Examiner, aided with the present application as a road map, has used impermissible hindsight reconstruction in arriving at the claimed invention.

In view of the above, all the references cited in the instant Office Action, whether considered separately or in any combination, fail to show or suggest the claimed invention as recited in independent claims 1, 13, 19 and 45 of the present application. In addition, there is no reason, motivation or suggestion to combine the cited references. Thus, independent claims 1, 13, 19 and 45 and all the claims depending therefrom are patentable for at least the reasons set forth above. Accordingly, withdrawal of the rejections is respectfully requested.

New Claims

New claims 66 – 76 depend from the independent claims, which as discussed above are believed patentable. Thus, new claims 66 – 76 should be patentable for at least the reasons discussed above with respect to the independent claims.

Among the new claims, claims 66, 70, 72, 74 and 75 additionally require the shell substantially enclosing the microchip. As discussed above, the references cited in the instant Office Action do not disclose such a “shell,” and there is no reason, motivation or suggestion to modify the systems as taught by the references to have a shell

substantially enclosing the microchip. Thus, new claims 66, 70, 72, 74 and 75 are patentable for at least these additional reasons.

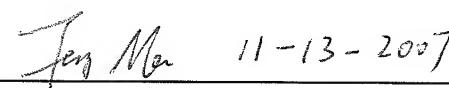
New claims 67, 71, 73 and 76 additionally require fluidic control using magnetohydrodynamic (MHD) fluidics. None of the references discloses such mechanism. In addition, there is no reason, motivation or suggestion to modify the systems as taught by the references to employ MHD as those systems do not have a microchip in the first place, and thus there is no motivation to use sophisticated and accurate fluidic control approaches such as the MHD. Thus, new claims 67, 71, 73 and 76 are patentable for at least these additional reasons.

New claims 68 and 69 additionally require the base unit interchangeably providing mechanical support to a plurality of different lollipops. Thus, the base unit effectively acts as a docking station for different lollipops for performing different tests, and for analyzing a large amount of data from different microchips. There is no motivation to modify the toothbrushes to arrive at the claimed invention, nor is there a motivation to modify the glucose monitor in the prior art, as the systems as taught by the references are directed to simple, monotonic data collection that does not require a plurality of different lollipops nor a docking station for these different lollipops.

Accordingly, entry and favorable consideration of new claims 66 – 76 are respectfully requested.

Applicant respectfully requests advancement of the claims to allowance. If the Examiner feels that a telephone interview would help with the examination of this case, the Examiner is encouraged to call the undersigned or his associates at the telephone number listed below.

Respectfully submitted,


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